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foil successfully withstood a static pressure of one atmosphere and the dynamic effects produced by the passage of shock waves. After traversing the shock tube, the beam left via a 1.5-mm opening, also covered by aluminum foil, and impinged on a terphenyl-polystyrene scintillator. The scintillator was observed by a photomultiplier tube, the output of which was displayed on an oscilloscope. The apparatus was calibrated by static measurements. Gas densities behind shock waves in argon were measured with the apparatus described. Mach numbers from 3 to 10 were achieved, and measurements were made at distances between 38 and 320 cm from the point at which the shock was initiated. The density discontinuities at the shock fronts agreed with the theoretical values (within the 10% accuracy claimed for the measurements). An approximately linear increase in density with distance behind the shock front was observed. This increase extended throughout the heated region, and its rate varied both with the Mach number of the shock and with the distance from the shock initiation point. The density increase is believed to be related to the development of flow in the shock tube. An alternative explanation offered by R.E. Duff (Phys. Fluids, 2, 207, 1959) for a similar (but not entirely identical) density rise is considered doubtful, because escape of gas from the shock tube into the electron gun was possible in Duff's experiments and was not taken into account.

"The authors express their gratitude to Prof. Yu.A. Dunayev for his interest in the

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work, and to engineer B.I.Klyavo and technician Ye.M. Zubkov for assistance in constructing the apparatus and conducting the experiments." Orig.art.has: 1 formula and 6 figures.

ASSOCIATION: none

SUBMITTED: 08Dec62

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: PH

NR REF Sov: 002

OTHER: 011

Card
3/3

give information on the dynamics of the physical processes that take place in shock tubes. The present work was devoted to study of the distribution of He atoms and ions in the gas and in the 1.7 TeV

"APPROVED FOR RELEASE: 03/14/2001

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"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

APPSTATUS AND IN CARRYING OUT THE EXPERIMENTS. ORIG. ETC. NAME ?

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

BUSYGIN, E.P.; TUMAKAYEV, G.K.

Measuring the gas density behind a shock wave in a shock tube by means
of the electron beam method. Zhur. tekhn. fiz. 39 no.1:122-127 Ja '64.
(MIRA 17:1)
I. Fiziko-tehnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

TUMAKHANI, A.V.

Buryat folk art. Kraeved. abor. no.7:78-92 '62. (MIRA 16:8)
(Art industries, Buryat)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

В. А. Гурин,
В. Н. Магаданов

О применении спектральной теории турбулентности
в задачах расчета потоков от поверхности поверхности земли
при излучении.

В. Е. Кондратев,
М. Ф. Балашов,
Т. Г. Тукаловский

Функции распределения уровня сигнала (недлинные запоминания).

10 июня
(с 10 до 16 часов)

В. Н. Гуринов,
В. П. Давыдов

К теории образования аномалий на подповерхностях в слое

В. А. Гурин,
Ю. В. Кулаковский,
С. Ф. Народов

Совместные результаты наблюдений за кратковременными изменениями подповерхности в слое R_d .

В. А. Гурин,
С. Ф. Народов,

И

Ю. В. Борисов,
А. В. Кондратев

О статистической способности системы измерений горизонтальных разностей атмосферных показателей.

В. А. Гурин,
М. В. Бончукова,
Т. А. Галант

Статистические свойства фазы волны, отраженной от атмосферы.

В. А. Гурин,
Т. А. Галант

Об автоматизированной обработке измерительных данных при исследовании вертикальной атмосферы

10 июня
(с 18 до 22 часов)

В. А. Борисов

Расчет величины связи высотомерных разностей.

Ш. Г. Шамшетдинов

Графо-аналитический способ расчета линий различия для различных узловых работ.

6

report submitted for the Centennial Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in A. S. Popov (VORON), Moscow,
8-12 June, 1959

TUMAKIN, N. P.

Red blood cell picture and the average erythrocyte diameter
following partial and subtotal gastric resection. Terap. arkh.
(MIRA 15:2)
no. 9:84-89 '61.

1. Iz kafedry fakul'tetskoy terapii (zav. - chlen-korrespondent
AMN SSSR prof. D. D. Yablokov) i kafedry patofiziologii (zav. -
zasluzhennyy deyatel' nauki RSFSR prof. D. I. Gol'dberg) Tomskogo
meditsinskogo instituta.

(ERYTHROCYTES) (STOMACH--SURGERY)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

TUMAKOV, I.M.

Henri Lebesgue and the theory of measure. Trudy MTIPP no.20;
15-17 '63,
(MIR 1714)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

761111A01, b-1

DEMENT'YEV, I.V., inzh.; ZHERNAKOV, Yu.I., inzh.; NIKOLIN, V.I., inzh.;
KOROLEV, A.N., inzh. [deceased]; TUMAKOV, V.A., inzh.

Using sublevel caving systems in pillar extraction. Razop. truda v
prom. 2 no.3:13-14 Mr '58. (MIRA 11:3)

1. Institut UNIPROMED'.
(Copper mines and mining)

ZAKHAROV, V. N., gornyy inzh.; TUMAKOV, V. A., gornyy inzh.;
PYS', F. N., gornyy inzh.

Working thin ore bodies with slim inclined boreholes. Gor.
zhur. no.11:36-41 N '62. (MIRA 15:10)

1. Sredneaziatskiy gosudarstvennyy institut tsvetnykh metallov,
Almalyk, Tashkentskaya oblast'.

(Kurgashinkan region--Boring)

BAKULEV, A.N., akademik, glavnnyy red.; BRUSILOVSKIY, L.Ya., prof., zamestitel' glavnogo red.; TUMAKOV, V.D., prof., zamestitel' glavnogo red.

[Great medical encyclopedia] Bol'shaya Meditsinskaia Entsiklopediya, Glav.red. A.N.Bakulev. Moskva, Gos.nauchnoe izd-vo "Sovetskaia entsiklopediya." Vol.13. Kletka - kosolapost'. Izd.2. 1959. 1215 columns. [List of articles and terms under the letter "K".] — Perechen' statei i terminov na bukvu "K". 8 p. [Phonograph record accompanying the article "Stammering"] — Grammofonnaia plastinka k stat'e Zaikanie.

(MIRA 13:5)

(MEDICINE--DICTIONARIES)

TUMAKOV, V.I.

TUMAKOV, V.I. Zimnie avtomobil'nye dorogi. [Moskva] Dorizdat, 1948. 117 p. illus.
"Rekomenduemaya literatura": 1 p. at end.

DLC: TE85.T8

SO: LC, Soviet Geography, Part I, 1951, Uncl.

TUMAKOV, V.I.

M: "Zimniye Automobil'nyye Dorogi"

(Winter Automobile Roads), Moscow, 1948, p. 36-37.

Abstracted in USAF "Treasure Island", on file in LIBRARY OF CONGRESS, AIR INFORMATION DIVISION, Report No. 35694. UNCLASSIFIED. 35695, p. 39; 35696, pp. 88-89.

TUMAKOV, V.I.; ZAMAKHAYEV, M.S., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor.

[Winter automobile roads] Zimnie avtomobil'nye dorogi.[Moskva]
Dorizdat, 1948, 117 p.
(Roads) (MLRA 8:10)

TUMAKOV, V. I.

M: Zimniye Avtomobil'nyyedorogi (Winter Automobile Roads), Moscow, 1948

Soviet Source:

Abstracted in USAF "Treasure Island", on file in Library of Congress, Air Information Division, Report No. 90752

15-57-8-11397

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8,
p 184 (USSR)

AUTHOR: Tumakov, V. V.

TITLE: Geological Structure and Petroleum Potential of the
Nabil' Region in Northern Sakhalin (Geologicheskoye
stroyeniye i perspektivy neftenosnosti Nabil'skogo
rayona no Severnom Sakhaline)

PERIODICAL: Tr. Vses. neft. n.-i. geologorazved. in-ta, 1956,
Nr 99, pp 72-87

ABSTRACT: The borders of the Nabil' petroleum-bearing region are:
on the southwest--the River Tym'; on the west--the
eastern slope of the Nabil' range; on the south--the
latitude of the southern end of the Lunskiy Bay; on
the east--the shore of the Sea of Okhotsk. The
presence of petroleum in this region has been known
since 1889. The oldest structure of the region is

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15-57-8-11397

Geological Structure and Petroleum Potential (Cont.)

the dislocated and metamorphosed Paleozoic deposits, believed to be Permian-Carboniferous, which compose the northern termini of the Nabil' and Lunskiy ranges. The rocks are broken with fissures along which extrusions of andesites and basalts occurred. The Tertiary deposits, overlying the Paleozoic, are divided into four groups: the tentatively established Uyni, the Dagi, the Okobykayskaya, and the Nutovo. The Uyni group (lower Miocene) is composed of dense argillaceous rock, tuffaceous sandstones and aleurolites. The Dagi group is composed of sandstones, aleurolites, sands, and argillites containing seams of coal. The Okobykayskaya svita (group) is composed of sandy argillaceous sediments and is divided into three levels. The geologic section of the Tertiary deposits ends in arenaceous formations of the Nutovo group. The area belongs to the eastern Sakhalin anticline, which here forms two branches corresponding to the Nabil' and Lunskiy Ranges. Geological surveys on a section of the Nabil' region have determined the presence of the Katangli, Imchin, Gamadeyskaya, Parkatinskaya, Bezlinskaya, Orkun'i,

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15-57-8-11397

Geological Structure and Petroleum Potential (Cont.)

and Kongi antiklinaly (anticlines). The Uglekutskoye podnyatiye (uplift) represents a complication on the axis of the Katangli anticline. The folds are located en echelon, and the distance between their axes is 3 km to 7 km. The highest of these folds is the Katangli anticline. The dip of the limbs does not exceed 10° to 15°. The industrial petroleum capacity of the lowlands at the Okobykayskaya svita (group) has been demonstrated. The best prospect in the Nabil' region is the Staro-Nabil' anticline which contains petroleum seeps associated with the deposits of the Okobykayskaya svita (group).

Card 3/3

A. V. Solov'ev

ACC NR: A16036936

SOURCE CODE: UR/0000/66/000/000/0142/0152

AUTHOR: Guzman, I. Ya.; Tumakova, Ye. I.

ORG: none

TITLE: Preparation and properties of carborundum refractory material with β -SiC binder

SOURCE: Nauchno-tekhnicheskoye obshchestvo chernoy metallurgii. Moskovskoye pravleniye. Vysokoogneupornyye materialy (Highly refractory materials). Moscow, Izd-vo Metalluriya, 1966, 142-152

TOPIC TAGS: refractory product, corundum refractory, silicon carbide

ABSTRACT: A systematic study has been conducted at the Moscow Institute of Chemical Technology im. Mendeleyev of the firing of green SiC-Si mixtures with a carbon-containing charge. The purpose of the study was to optimize the operating conditions of the preparation process of carborundum refractories with a β -SiC binder which was formed in the process. This refractory exhibited the highest characteristics. The β -SiC is formed, besides silicon oxynitride and cristobalite, by the reaction of Si with CO which is the product of thermal oxidation of the carbon-containing charge in the air. Composition of the starting mixture, particle size and purity of silicon, type of the carbonaceous charge, firing temperature, and compacting pressure were studied as the primary technological factors which may affect the firing process,

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ACC NR: AP6036936

and hence the ultimate properties of the product. In this respect, the composition of the binder which was formed at 1100—1500°C by the reaction Si with the components of the gas phase was found to have a decisive importance. The weight change of the samples in the process of firing was the indicator of the progress of the reaction and of all properties of the product. The maximum weight gain (-70%) which was reached at 1300—1500°C determined a total completion of the reaction. Density, hence compressive strength and all other properties of the material fired under the conditions of total completion, were shown to depend on the bulk density of the raw material and Si content in the charge. The maximum density of the granular refractory may be obtained with the most dense raw material and moderate Si content in the charge, but a high Si content is required to obtain the same result in refractories without a coarse grained filler. The use of a coarse-grained SiC and a highly dispersed Si powder was recommended for obtaining a dense raw material. Orig. art. has: 6 tables, 1 figure, and 4 formulas.

SUB CODE: 11/ SUBM DATE: 02Nov69/ ORIG REF: 004/ OTH REF: 002/ ATD PRESS: 5107

Card 2/2

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Fig. 1.
1 - triangular metallic plate; 2 - wide wall of wave-
guide; 3 - narrow wall of wave-guide.

Guzman, I.Ye.; Tishchenko, Yu.P.

Formation of bonds in the firing process of refractories of a
silicate-carbonate base. Ogneupory 30 no.5:41-46 '65. (VNIIR 1965)
1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I.Mendelejeva.

"APPROVED FOR RELEASE: 03/14/2001

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due to interaction of SIC and residual silicon with C60 to form silicon nanowires

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

S/079/63/053/002/006/009
5204/D307

AUTHORS: Minkin, V.I. and Tumakova, Zh. A.

TITLE: Structure and reactivity of the condensation products of aromatic amines with aliphatic aldehydes. I. Isomerism and structure of ethylidenedianiline dimers

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 2, 1963,
642 - 646

TEXT: Condensations of aniline with acetaldehyde, at -5 to 40°C, in neutral solvents (MeOH, EtOH, PrOH, petroleum ether, CHCl_3) gave rise to 4-isomeric bis-ethylidenedanilines (2-methyl-4-phenylamino-1,2,3,4-tetrahydroquinolines). The cyclic tetrahydroquinoline structures were confirmed by uv absorption spectra in the region 200 - 350 $\text{m}\mu$ - the isomers gave intense bands at 250 $\text{m}\mu$ and less intense maxima at 300 $\text{m}\mu$. In the ir ($1500 - 1700 \text{ cm}^{-1}$) region, the absorption bands corresponding to C = N bonds were not observed, further confirming the cyclic structure. The existence of 4 isomers is

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Structure and reactivity ...

S/079/63/033/002/008/009
D204/D307

explained by the conformations of the piperidine ring. There are 2 figures.

SUBMITTED: November 15, 1961

Card 2/2

DATSKO, V.G. [deceased]; VASIL'YEVA, V.L.; TUMAKOVA, Zh.A.

Content of organic carbon in the silts of the Tsimlyansk
Reservoir. Gidrokhim. mat. 37:71-78 '64. (MIRA 18:4)

1. Gidrokhimicheskiy institut Glavnogo upravlen'ya gidrometeoro-
logicheskoy sluzhby pri Sovete Ministrov SSSR, Novocherkassk.

MINKIN, V.I.; TUMAKOVA, Zh.A.

Structure and reactivity of the condensation products of
aromatic amines with aliphatic aldehydes. Part 1.: Isomerism
and structure of ethylideneaniline dimers. Zhur.ob.khim. 33
no.2:642-646 F '63. (MIRA 16:2)
(Aniline) (Acetaldehyde) (Isomerism)

OSIPOV, O.A.; MINKIN, V.I.; TUMAKOVA, Zh.A.

Dipole moments and structure of bis-salicylalarylminates of nickel
(II). Zhur. strukt. khim. 5 no.6:918-919 N-D '64. (MIRA 18:4)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

TUMALEWICZ, B.

Profitableness of the application of decorticators in the retting plants. Biuletyn Włok. Lyk.

p. 13 (Przemysł Włókienniczy. Vol. 10, no. 7, July 1956. Łódź, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

TUNALEWICZ, B. ; BARTOSIK, A.

Possibilities of the substitution of Polish Indian okra fiber for the imported coconut fiber. Biuletyn Włok Lyk. p. 21.
(Przemysł Włókniarski, Vol. 10, No. 10, Oct. 1956, Krakow, Poland)

SO: Monthly List of East European Accessions (HEAL) Lc. Vol. 6, No. 8, Aug. 1957. Uncl.

Annals of Plastics

Possibilities of producing fiber filaments of nitrile latex from local raw material. Liaison with Inst. . . 1

PLASTIC MATERIALS vol. 4, no. 1/2, Jan./Feb. 1954

Roland

so. PLAST MATERIALS AGGREGATE LIST vol. 5, no. 10 Oct. 1956

TOKARIEWICZ, S.

"Organization of stations for manufacturing fiber from hemp and flax in machine-tractor stations and rural community machine-tractor stations." (p.69) NOWE ROLNICTWO (Panstwowe Wydawnictwo Rolnicze i Lesne) Warszawa, Vol. 3, no. 4, Apr. 1954

SO: EAST European Accessions List, Vol 3, no. 8, August 1954

POL.

67-11
67-11
(2)u *Anatomic Structure of Fibre Strands in Decorticated*
Fibroblasts, W. Anatomic Structure of Fibre Strands in Decorticated
"Ramię Płucna."
"Budowa anatomiczna pępeków włókna w dekortykowanym tle
także" (Prace Inst. Przed. Włók. Łyk No 1), Warszawa, 1934, PWK
8 pp. 6.66²

The structure of strands of rame fibres has been studied by many authors. The results of these studies are very important with respect to the question of the nature of the rame fibres. In particular, it is important to know the number of longitudinal, transverse and oblique strands in each rame fibre, the size of the individual strands and the arrangement of the strands.

According to the first work of Wiesner, the rame fibres consist of a system of longitudinal strands which are oriented parallel to the axis of the stalk. The length of the strands is about 10 mm. The diameter of the strands is about 10 microns. The arrangement of the strands is divergent. Wiesner believes that "the rame fibres consist of elementary fibres or elementary fibres into strands". The arrangement of elementary fibres in the rame plant around the vascular cylinder is described. Two or three cells combine into strands and part of the cells remain loose. There are instances of units consisting of from 2 to 13 other loosely formed in the parenchyma of the phloem. Units most frequently met with consist of from 3 to 7 cells. Other authors — Kuklin, Magitt and Tobler — are of the opinion that there are no strands in the rame plant, but only loose cell units. Wiesner, on the other hand, maintains that the rame plant has no rame stalk of phloem cells. Incomplete, a statement which sometimes gives rise to the erroneous idea that because phloem cells are isolated they do not form strands. Experiments carried out at the Institute of Cellulose Fibres Industry seem rather to corroborate the view of Wiesner. In particular, in the rame phloem the arrangement of the cells is such that they cannot form strands. This is due to the fact that the arrangement of the cells in the rame plant is not the same as in the stalk. The system of strands in the rame plant is a feature of the phloem is less compact. Moreover the relatively large size of the fibre in longitudinal plane and the occurrence, as determined by the chemical analysis, of small quantities of protein B which is typical of plant occur except in strands of fibre, is indicative of the strand system of rame fibre.

APTEKAR', I.L.; TUMAN, B.L.

Adiabatic process at high temperatures. Zhur.eksp. i teor.fiz.28
no.6:758-759 Je '55. (MIRA 8:9)

1. Dnepropetrovskiy gornyy institut
(Ionization of gases) (Thermodynamics)

SHADRIKOV, I., brigadir molochnotovarnoy fermy; BANNOVA, T. pomoskhnik brigadira, chlen rabochego komiteta; TUMANDEYEVA, L., profgruporg; KAYMAKINA, Ye., doyarka; ANTIPOV, Yu., doyarka; FEDOROV, M., podsmennaya doyarka; ARKHANDEYEV, B., skotnik; NURMAMETOVA, R., telyatnitsa.

Disseminate the progressive practice among all state farm workers.
Sov. profsciuz 17 no. 5:12-14 Mr '61. (MIRA 14:2)

1. Sovkhoz "Kamash," Kuybyshevskoy oblasti.
(Kuybyshev Province—Dairying) (Socialist competition)

STRADYN', Ya. O. [Stradins, J.]; TUMANE, I. K.; AREN, A. K. [Arens, A.];
VANAG, G. Ya. [Venags, G.] [deceased]

Cleavage of a C-N bond in the polarographic reduction of 2-amino-
1,3-indandiones. Zhur. ob. khim. 35 no.8:1327-1332 Ag '65.
(MIRA 18:8)

1. Institut organicheskogo sinteza AN Latviyskoy SSR i Rizhskiy
politekhnicheskiy institut.

TUMANIAN, A.M.

Use of a new Soviet preparation, himaline, in treating some diseases of the gastrointestinal tract. Trudy Erev.med.inst. no.11:277-279 '60. (MIRA 15:11)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. klinikoy - prof. T.S.Mnatsakanov) Yerevanskogo meditsinskogo instituta.
(ALKALOIDS--THERAPEUTIC USE)
(ALIMENTARY CANAL--DISEASES)

7A Moscow, Russia, 1947.

Moscow

Chief Political Department.

Stalin Tank and Mechanized Forces Academy.

Soviet Source: N: Krasnaya Zvezda, Moscow, 1947.

Abstracted in USAF "Treasure Island" Report No.
2677, on file in Library of Congress, Air
Information Division.

OVADOVSKII; TUMANISHVILI (Eng.)

Electric Insulators and Insulation

Fastening bolts in porcelain trolley insulators with the aid of expanding cement. Biul. stroi. tekhn. 9, no. 13, July 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

2

OVADOVSKIY; TUMANISHVILI (Eng.)

Electric Insulators and Insulation

Fastening bolts in porcelain trolley insulators with the aid of expanding cement.
Biul. stroi. tekhn. 9, no. 13, July 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED

TUMANISHVILI, D. G.

Tumanishvili, D. G. - "The calculation of pauses in equivalent formulas in the heating of electric motors," A commemorative collection of transactions dedicated to the 25 th anniversary of the Institute, (Grua politekhn. in-t im. Kirova, № 17), Tbilisi, 1948, p. 265-58, (Resume in Georgian)

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh statey, No. 25, 1949).

TUMANISHVILI, G. D.

"The Significance of Kinesthetic and Labyrinth Irritation in Sleep and Conscious State Changes." Cand Biol Sci, Tbilisi State Inst, Tbilisi, 1953.
(RZhBiol, No 2, Sep 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

TUMAIVISTVILE, G. P.

1041. ღმისელი აქტორის ნამდ. ცხარულას მეს მემანა ას. ცოდნული კოდენის მომართვის მიზანით მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
თვალას ველაშვილ გეორგის. ვაჭავა პარავანი მეცნიერობის ერთ-ერთ მასშტაბური მიმართ მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Sav. 1953, 20.6.
1042. ღმისელი აქტორის ნამდ. ცხარულას მეს მემანა ას. ცოდნული კოდენის მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
თვალას ველაშვილ გეორგის. ვაჭავა პარავანი მეცნიერობის ერთ-ერთ მასშტაბური მიმართ მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
თვალას ველაშვილ გეორგის. ვაჭავა პარავანი მეცნიერობის ერთ-ერთ მასშტაბური მიმართ მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
თვალას ველაშვილ გეორგის. ვაჭავა პარავანი მეცნიერობის ერთ-ერთ მასშტაბური მიმართ მომართვის მიზანით განხორციელდა 1952. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
1043. ღმისელი აქტორის ნამდ. ცხარულას მეს მემანა ას. ცოდნული კოდენის მომართვის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
კაჯახან თემა ალექსანდროს. კიბის მეცნიერობის ას. კოდენის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Zav. 1953, 20.6.
1044. ღმისელი აქტორის ნამდ. ცხარულას მეს მემანა ას. ცოდნული კოდენის მომართვის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Lukaško ალექსანდროს. კიბის მეცნიერობის ას. კოდენის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
1045. ღმისელი აქტორის ნამდ. ცხარულას მეს მემანა ას. ცოდნული კოდენის მომართვის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.
მესამართ ირაკა ცარის. სამართლის მომართვის მიზანით განხორციელდა 1953. 100 გ. 25 იუ. მდ.
Georgi 1953, 20.6.

724
Dimension of
Candidate Molotov's File

Def. at
Tbilisi State U.

TUMANISHVILI, G.D.

Investigation of conditioned somniferous reflexes. Soob, AN Gruz, SSR
14 no.8:501-506 '53. (MLRA 7:5)

1. Akademiya nauk Gruzinskoy SSR Institut fiziologii, Tbilisi.
Predstavлено академиком I.S.Beritashvili.
(Conditioned response) (Sleep)

USSR / General Biology. Individual Development.
Regeneration.

B-4

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81037.

Author : Tumanishvili, G. D., Dzhandieri, K. M., Svanidze,
 T. K.

Inst : Not given.

Title : Stimulation of the Regeneration Process by the
 Action of Tissue Extracts.

Orig Pub: Dokl. AN SSSR, 1956, 107, No 1, 182-184.

Abstract: In the wintertime through incisions made on the
liver (L) of the frogs, Rana ridibunda. In subsequent
subcutaneous injections (I) of the L extract
of rabbits and hens, the damage, in the course of
10 days, was filled in with a newly formed liver
tissue. With the I of the extract of a hen muscle,
a plug was formed from a cellular detritus at the
place of the wound. The introduction of the extract

Card 1/2

15

1. Stimulation of the regenerative processes by action of tissue extracts. G. D. Imanashev, S. M. Isakunduri, and I. K. Sviridov. "Zhurnal Fiziolicheskogo Nauchnogo SSSR," 107, No. 4, 1960, p. 1100-1107 (1961). Rats, of rabbit and frog livers made with 0.50% NaCl or Ringer stimulate the restoration of a mechanically damaged liver. The magnitude of the effect is greatest with rabbit liver. A hen exists, least from frog ext. Similar effect was obtained with rabbits and guinea pigs. If the ext. is incubated by 5 days at 60-70°, the result is negative but in conjunction with 15 mg. ascorbic acid the result is as described above. Similarly, muscle ext. of man muscle or frog muscle (less effective) stimulates the regeneration of mechanically damaged frog muscle. M. Kosobudin

*K*nowing the condition of growth of chick embryo
by the number of developed feathers. The relationship
is not very close, but it is evident that the older
birds have a higher percentage of feather development
than the younger ones. For example, at 10 days, 38%
of the feathers were developed, while at 12 days, 48%.

RESULTS - The results with liver growth were consistently positive,
although weak with older specimens. A more effect was also
observed with older birds, specimen showing a marked heart and
liver enlargement effect if the embryo was maintained at room
temperature or in the cold for several hours at 10-18° or in the
cold for 5 days. The effect is thus connected with thermo-
lytic protein matter. LM Jan 1965

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

TUMANISHVILI, G.D.

Stimulating the process of regeneration by tissue extracts [with
summary in English]. Zhur. ob. biol. 19 no.5:369-375 8-0 '58 (MIRA 11:10)
(REGENERATION (BIOLOGY))
(TISSUE EXTRACTS)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

TUMANISHVILI, G. D.

Stimulation of the regenerative process under the action of tissue
extracts. p. 104

ANALELE ROMÂNE-SOVIETICE. SEMINA BIOLOGIE (Academie Republicii Populare
Române. Institutul de Studii Româno-Sovietice
Bucuresti, Rumania
Vol. 13, no. 2, April/June 1959

Monthly list of East European Accession Index (EEAI), LC Vol. 8, No. 11
November 1959
Uncl.

KOVALEVSKIY, Vladimir Onufriyevich; GABUNIYA, L.K., doktor geol.nauk
[translator]; OKROPIRIDZE, O.V. [translator]; TUMANISHVILI, G.D.,
kand.biolog.nauk [translator]; NATADZE, L.L., kand.biolog.nauk
[translator]; DAVITASHVILI, L.Sh., otd.red.; NIKITINA, O.G.,
red.izd-va; KASHINA, P.S., tekhn.red.

[Collection of scientific works] Sobranie nauchnykh trudov.
Moskva, Izd-vo Akad.nauk SSSR. Vol.3. 1960. 350 p.

(MIRA 14:2)

(Ungulata, Fossil)

TUMANISHVILI, G.D.

Effect of γ -radiation on the stimulating properties of tissue extracts. Trudy Inst. fiz. AN Gruz.SSR 7:113-117 '60.

(MIRA 14:10)

(Radiation—Physiological effect)
(Tissue extracts)

AUTHOR: Tumanishvili, G. D. S/020/60/131/01/057/060
B011/B009

TITLE: On the Quantity of Tissue Extract Required for the Stimulation
of Growth of a Homologous Organ of the Chick Embryo

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 206 - 208
(USSR)

ABSTRACT: The author investigated the stimulating effect of liver ex-
tract upon the development of the liver of a chick embryo in
dependence upon the amount of liver extract used (Refs 4,5).
Earlier data given by other research workers were conflicting.
The author compared the ratio of the weights of the liver and
the body (without yolk sac). The liver of a full-grown hen was
crushed in a mortar, mixed with an 0.9% common salt solution,
and the extract was then filtered through a diaphragm filter
or centrifuged. The dry substance, and in some cases the phos-
phorus of the ribonucleic and desoxyribonucleic acids, con-
tained in the extract were determined. It may be seen from
table 1 that the extract contains sufficiently constant amounts
of these substances. Embryos of an age of 12 days were used.
The extract was introduced into the egg through a hole pierced
in the shell and skin. The embryos were opened 48 hours after

Card 1/3

On the Quantity of Tissue Extract Required for S/020/60/131/01/057/060
the Stimulation of Growth of a Homologous Organ B011/B009
of the Chick Embryo

injection. The effects of the following amounts of the dry substance were investigated: 0.3; 0.6; 1.2; 1.5; 1.8; 2.4; 3.6; 4.8 and 6.0 mg. Table 2 summarizes the results of the experiments. The dependence of the stimulating effect upon the dose is shown in figure 1, from which it can be seen that the growth of the embryonic organs is stimulated only within a certain optimum range of dosages. If the doses are larger, the stimulating effect of the extract disappears. Still, such excess doses do not inhibit the growth of the liver, as had been maintained by some research workers (Refs 10, 15-20). The dependence proved by the author of the stimulating effect upon the amount of extract used does, however, not permit the assumption that this amount constitutes the only determinant of the direction of action of intracellular substances upon the growth and differentiation of a homologous tissue or organ. Possibly the inhibiting effect observed by other research workers is due to a specific substance - an inhibitor - which can hardly be extracted by the author's extraction method, and which becomes effective with higher concentrations than were obtained by the author. There

Card 2/3

On the Quantity of Tissue Extract Required for
the Stimulation of Growth of a Homologous Organ
of the Chick Embryo

S/020/60/131/01/057/060
B011/B009

are 1 figure, 2 tables, and 20 references, 6 of which are
Soviet.

ASSOCIATION: Institut fiziki Akademii nauk GruzSSR (Institute of Physics
of the Academy of Sciences, Gruzinskaya SSR) ✓

PRESENTED: November 14, 1959, by I. I. Shmal'gauzen, Academician

SUBMITTED: July 28, 1959

Card 3/3

TUMANISHVILI, G.D.

Regeneration of tissues treated with extracts irradiated by
gamma rays and X rays. Trudy Inst.fiz.AN Gruz.SSR 8:109-114
'62. (MIRA 16:2)
(Regeneration (Biology)) (Radiation--Physiological effect)

TUMANISHVILI, G.D.; TABIDZE, D.D.

Dynamics of growth of the liver in a chicken embryo when stimulated by homologous tissue extract. Dokl. AN SSSR 146 no.1:246-249
S '62. (MIRA 15:9)

1. Institut fiziki AN Gruzinskoy SSR. Predstavлено академиком
I.S. Beritashvili.
(Embryology--Birds) (Tissue extracts)

TUMANISHVILI, G.D.; MANDZHAGALADZE, V.P.; DZHANELIDZE, Kh.N.

Effect of liver extracts on nucleic acid synthesis in a non-regenerating frog liver. Biokhimiia 28 no.6:942-950 N.D.'63 (MIRA 17:1)

1. Institute of Physics, Academy of Sciences of the Georgian S.S.R., Tbilisi.

GACHECHILADZE, R. G.; TUMANISHVILI, G. D.

Change in the nucleic acid content of a regenerating rat testicle
under the influence of rabbit testicle extract. Dokl. AN
SSSR 156 no. 1:171-173 by '64. (MIRA 17:5)

1. Institut kibernetiki AN GruzSSSR i Institut fiziki AN GruzSSSR.
Predstavleno akademikom A. I. Oparinym.

ACCESSION NR: AP4031762

S/0251/64/033/003/0549/0556

AUTHORS: Tumanishvili, G. D.; Mandzhgaladze, V. P.; Dzhanelidze, Kh. N.

TITLE: Effect of ionizing radiation on the stimulating properties of tissue extracts (Presented by Academician E. L. Andronikashvili on 2 September 1963)

SOURCE: AN GruzSSR. Soobshcheniya, v. 33, no. 3, 1964, 549-556

TOPIC TAGS: frog liver extract, chicken liver extract, irradiated liver extract, nucleic acid synthesis, DNA liver synthesis, RNA liver synthesis, x ray apparatus RUP 200

ABSTRACT: Experiments were conducted on frogs (*Rana ridibunda*) injected intraperitoneally with 0.4 ml of chicken liver and frog liver extracts irradiated with a 1000 r dose by means of the x-ray apparatus RUP-200. The injections were administered immediately after surgical removal of a section of the liver. The amount of nucleic acid (DNA and RNA) was determined within 12-96 hours after perfusion of the frogs with 0.14 molar NaCl. The obtained values (divided by the number of nuclei counted under a microscope) were used to gauge the dynamics of stimulation. The details of the technique are given in an earlier paper by G. D.

Card 1/2

ACCESSION NR: AP4031762

Tumanishvili, V. P. Mandzhgaladze, and G. N. Dzhanelidze (Deystviye ekstraktov pecheni na sintez nukleinovykh kislot v regeneriruyushchey pecheni lyagushki. Biokhimiya, 28, v. 6, 942-950, 1963). It was found that irradiated chicken liver extract had a more pronounced and earlier stimulating effect on the synthesis of nucleic acids than the native extract. Evidence points to the fact that the stimulation by irradiated liver extracts tends to preserve a constant DNA concentration. Orig. art. has: 2 tables and 1 chart.

ASSOCIATION: Academiya Nauk Gruzinskoy SSR, Institut fiziki (Academy of Sciences, Georgian SSR, Institute of Physics)

SUBMITTED: 27Nov63

DATE ACQ: 01May64

ENCL: 00

SUB CODE: LS

NO REF Sov: 005

OTHER: 000

Card 2/2

TUMANISHVILI, G.D.; NATADZE, L., red.

[Some problems of the regulation of the growth of living tissues]
Nekotorye voprosy reguliatsii rosta zhivykh tkakei. Tbilisi,
Metaniereba, 1965. 191 p. (MIRA 18:8)

AKHVERDOV, I.N., kandidat tekhnicheskikh nauk; OVADOVSKIY, I.M., kandidat tekhnicheskikh nauk; TUMANISHVILI, V.A., inzhener; POPOV, A.N., kandidat tekhnicheskikh nauk, nauchnyy redaktor; BEGAK, B.A., redaktor izdatel'stva; BOROVNEV, N.K., tekhnicheskiy redaktor

[Prestressed reinforced concrete floor slabs in the building industry: manufacture and use] Napriazhennno armirovannye plity-nastily v stroitel'stve; izgotovlenie i primenenie. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 96 p.

(MLRA 9:10)

(Prestressed concrete)

(Concrete slabs)

TUMANKOV, V. I.

Zimnie avtomobil'nye dorogi. [Winter automobile roads]. Moskva, Dorizdat, 1948.
117 p. illus.

"Rekomenduemaia literatura": 1 p. at end. DLC: TE85.T3

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress,
Reference Department, Washington, 1952, Unclassified.

1. TUMANORSKIY, S. N.
2. USSR (600)
4. Lime
7. Liming acid soils in the non-chernozem belt of European Russia. Dost sel'khoz No. 12 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

TUMANOV, A.

"The golden land." Rabotnitsa 34 no.7:24 Jl '56. (MIRA 9:9)
(Burma)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

TUMANOV, A.

The people of Taiwan are resisting. Sov.mor. 17 no.18:23 S '57.
(MIRA 10:11)

(Formosa--Foreign relations--United States)
(United States--Foreign relations--Formosa)

TUMANOV, Aleksey.

Director of the All-Union Institute of Aircraft
Materials (Moscow, USSR)

Soviet Source: N: Moscow News, '46, Soviet Union

Abstracted in USAF "Treasure Island" Report No.
3962, on file in Library of Congress, Air
Information Division.

USSR/Analysis of Inorganic Substances.

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957

Author : I. M. Korenman, A. A. Tumanov.

Inst :

Title : Precipitation of Cadmium together with Antipyrene Tetrabromomercuriate.

Orig Pub: Zh. Analit. Khimii, 1956, 11, No 4, 430 - 436.

Abstract: In order to separate small quantities of Cd by coprecipitation, the little soluble compound formed at the interreaction of Hg⁽²⁺⁾ with antipyrene and bromide, $(C_{11}H_{12}ON_2)_2 \cdot H_2(HgBr_4)$. $2C_{11}H_{12}ON_2$ was used. For the determination of small quantities of coprecipitated Cd, Cd115 was used, the initial specific activity of the

Card 1/4

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USSR/Analysis of Inorganic Substances.

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957

solution of Cd(NO₃)₂ being 5000 imp/min per 1 mg of Cd; solutions with lesser specific activities were prepared by diluting this solution. At a concentration of Cd < 70 μ /ml, Cd did not produce any precipitation with the antipyrinebromide reagent (I), therefore, during the study of the coprecipitation of Cd, its concentration was always considerably < 70 μ /ml. To 1 ml of Hg (NO₃)₂ solution containing microanalytic quantities of Cd, 1 ml of I was added, one hour later the precipitate was separated, washed with the mixture ether - C₂H₅OH (7 : 1), and dried at 100°. Cd was determined radiometrically. The influence of the concentration of HNO₃, antipyrine,

Card 2/4

- 26 -

USSR/Analysis of Inorganic Substances.

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957

KBr, macrocomponents and microcomponents, of the temperature, of the duration of the precipitant action and of some other factors on the coprecipitation of Cd was studied. The optimum conditions of coprecipitation were selected: 1 ml of the analysed solution was acidified with 0.05 ml of 4 n. HNO₃ and 1 ml of the precipitant (solution of 10 g of antipyrine and 20 g of KBr in 70 ml of water) was added. The coprecipitation degree of Cd is a function of the ratio between the contents of Hg and Cd. Independently of the absolute contents of Cd, all results being plotted produce a curve described with an empirical equation. The coprecipitation of Cd

Card 3/4

- 27 -

A. A. TUMANOV

5(2) 21(5) FALSE I BOOK EXPLANATION Sov/1900

Академия наук СССР. Комиссия по аналитической химии

Применение радиоактивных изотопов в аналитической химии
(использование радиоактивных изотопов в аналитической химии)
[Series: Изд: Труды, т. 9 (12)]
изд-во АН СССР, 1958. 366 P. [Series: Изд: Труды, т. 9 (12)]

Бюл. №1. И.П. Алиарин, Corresponding Member, USSR Academy
of Sciences; Ed. of Publishing House: А.Н. Терновский; Tech.
Ed.: Г.В. Поляков.

ПРЕДОХР. This book is intended for chemists and chemical
engineers concerned with work in analytical chemistry.

CONTENTS: The book is a collection of the principal papers
presented at the Second Conference on the Use of
Radioactive Isotopes. The problems discussed at the
conference included coprecipitation, aggl., and solubility
of precipitates, determination of the instability constants

Card 1/10

of complex compounds, separation of rare earth metals, and
separation chromatography. No personal notes are mentioned.
There are 321 references, 75 of which are Soviet, 33 German,
19 French, 8 Swedish, 2 Hungarian, and 2 Czech.

TABLE OF CONTENTS:

Use of Radioactive Isotopes (Cont.) Sov/1900

Ларутина, А.К., и др. Родин. Study of the
Analytical Chemistry of Phosphorus with the Aid
of Radioactive Isotope P_{32} 274

Миллер, А.В., А.А. Сорокина, и А.С. Маленникова.
Use of Radioactive Indicators in the Analysis of
Rare Earth Elements 284

Карманов, И.М., А.А. Туманов, и З.В. Кравцова.
Precipitation of Zirconium Dihaloxydinate [Analysts Note] 288

Привалова, М.М., и Д.И. Пребеников. Extraction
Method of "Tetra" and Pentavalent Antimony with
Trifluorophosphate 302

Биревская, Е.И. Determination of Tungsten and
Manganese in High Alloys 323

Биревская, Е.И. Determination of Manganese in the
Presence of Large Quantities of Titanium 329

Card 8/10

KORENMAN, I.M.; TUMANOV, A.A.; KRAYNOVA, Z.V.

Precipitation of zirconium dihalo-8-quinolinol complexes. Trudy
kom.anal.khim. 9:294-300 '58. (MIRA 11:11)
(Quinolinol) (Zirconium compounds)

"APPROVED FOR RELEASE: 03/14/2001

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APPROVED FOR RELEASE: 03/14/2001

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"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420009-6"

TUUMANOV, H.H.

SHEYANOVA, F.R.; TUUMANOV, A.A.; GLAZUNOVA, Z.I.; DEMIN, O.I.; FILIPPOVA, N.A.;
DUBROVSKAYA, T.P.; BOIKO, Ye.P.

Brief reports. Zav. lab. 23 no. 544 '57. (MIRA 10:8)
(Radioisotopes--Industrial applications)
(Chemistry, Analytical)

KORENMAN, I.M.; TUMANOV, A.A.; KRAYNOVA, Z.V.

Study of the precipitation and coprecipitation of some hydroxy-
quinolinates by means of radioactive tracers. Trudy kon.
anal. khim. 11:198-208 '60. (MIRA 13:10)

1. Gor'kovskiy gosudarstvennyy universitet im. N.I.Lobachevskogo.
(Quinolinol) (Cobalt--Isotopes) (Zirconium--Isotopes)
(Precipitation (Chemistry))

S SIND24443
S/08/61/000/006/004/015
B101/B201

AUTHORS: Korenman, I. M., Tumanov, A. A., Yanayeva, V. Ya.

TITLE: Composition and solubility of some complex compounds of indium

PERIODICALS: Referativnyy zhurnal. Khimiya, no. 6, 1961, 106, abstract 6845 (6V43). ("Tr. po khim. i khim. tekhnol. (Gor'kiy)", 1960, vyp. 1, 86 - 90)

TEXT: Complex compounds of In and SCN with antipyrine pyramidal and dianantipyril methane have been synthesized. Their composition was expressed by formulas: $[In(C_{11}H_{12}ON_2)_3](SCN)_3$, $[In_2(C_{13}H_{17}ON_3)_3](SCN)_6$, $[In_2(C_{23}H_{24}O_2N_4)_3](SCN)_6$. The solubility of the complex compounds concerned has been determined in water, sulfuric acid, and acetic acid of different concentrations, and also in some organic solvents. The formation of $[In_2(C_{23}H_{24}O_2N_4)_3](SCN)_6$ has served to determine small amounts of In. [Abstracter's note: Complete translation]

X

Card 1/1

TUMANOV, A. N.

TUMANOV, A. N.

"Coprecipitation of Certain Cations during Precipitation of Calcium and Mercury with an Antipyrine Bromide Reagent." Min Higher Education, Gor'kiy State U, Chair of Analytic Chemistry, Gor'kiy, 1955. (Dissertation for the Degree of Candidate of Chemical Sciences.)

SO: M-972, 20 Feb 56

TUMANOV, A.A.; YEFIMYCHEV, V.S.

Analytical potentialities of salicylal-2aminophenol. Report 1:
Behavior of salicylal-2-aminophenol in aqueous solutions. Zhur.
(MIRA 18:9)
anal. khim. 20 no.9:889-897 '65.

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom
universitete imeni N.I. Lobachevskogo.

TUMANOV, A.A.

Conference on the preparation and analysis of extra-pure elements
and substances. Zav.lab. 28 no.1:126-127 '62. (MIRA 15:2)
(Chemistry, Analytical--Congresses)

ACCESSION NR: AP4039249

S/0032/64/030/006/0652/0654

AUTHOR: Tumanov, A. A.; Sidorenko, A. N.; Taradenkova, F. S.

TITLE: Determination of arsenic in silicon and germanium, and in gallium arsenide

SOURCE: Zavodskaya laboratoriya, v. 30, no. 6, 1964, 652-654

TOPIC TAGS: ultrapure semiconductor, microanalysis, arsenic, silicon, germanium, gallium arsenide, microquantities, impurity, arsenic hydride, arsine, mercuric bromide, analytical determination, coprecipitation, manganese dioxide, ethyl alcohol, isopropyl alcohol

ABSTRACT: Two methods for the determination of microquantities (less than 0.01 microgram) of arsenic in metallic silicon or germanium are described. For the silicon the basic principle of the method consists in the reduction of As to AsH₃; the latter reacts with mercuric bromide producing the yellow compound As(HgBr)₃. The quantitative determination is carried out by comparing the discoloration obtained with the standard samples. The method has

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ACCESSION NR: AP4039249

been experimentally controlled; the analysis requires 3.5 hr. The direct reduction, as above, cannot be achieved in germanium salt solutions. In this case, As is first separated from germanium by a coprecipitation with manganese dioxide, which can be repeated if the arsenic content in the sample is less than 10 micrograms. After the separation the method described above can be applied. In addition, it is recommended the separation of metallic arsenic from gallium arsenide be accomplished by extraction with ethyl or isopropyl alcohol in which As is more than 4000 times as soluble, compared with GaAs. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 18Jun64

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NO REF SOV: 002

OTHER: 000

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S/0032/64/030/009/1058/1060

ACCESSION NR: AP4044894

AUTHORS: Tumanov, A. A.; Sidorenko, A. N.; Korenman, Ya. I.

TITLE: Kinetic method for determining the microadmixture of iodine in metallic silicon and germanium

SOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1058-1060

TOPIC TAGS: iodine, cerium reduction, arsenic acid/ FEK N 57 photoelectric colorimeter

ABSTRACT: The method for determining small iodine admixtures is based on the reaction of tetravalent cerium salts with arsenious acid. This reaction is catalyzed by traces of iodine contained in silicon and germanium. In this process the yellow tetravalent cerium is reduced to the colorless trivalent state, while the arsenious acid is oxidized to arsenic acid. The rate of color fading is recorded with a FEK-N-57 photoelectric colorimeter. The analysis should be performed at 20°C, using beakers of P-1 glass (glass types 49-2, 23-1, and Ergon were found unsuitable). A standard calibration curve was charted for the optical density of tetravalent cerium in the presence of metallic silicon and various known concentrations of iodine. The procedure consisted of adding 5 ml of a 10% KOH solution and 0.2 ml of a 30% H₂O₂ to 10 mg of powdered silicon. This was heated until

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ACCESSION NR: AP4044894

dissolved, after which measured amounts of KI were added. The solution was next neutralized with sulfuric acid, diluted to 25 ml, and transferred in 5-ml aliquots into test tubes where it was acidified with sulfuric acid and mixed with 0.2 ml of 0.1 normal solution of $\text{Ce}(\text{SO}_4)_4$ and with 0.2 normal solution of Na_3AsO_3 . A maximum fading of the solution was observed within 60 minutes. A similar procedure was used in plotting a calibration curve in the presence of germanium, the determination of optical density being conducted after 30 minutes. By such a technique it was possible to determine $5 \cdot 10^{-5}\%$ iodine in 10 mg of silicon, and $5 \cdot 10^{-4}\%$ iodine in 1 mg of cerium. The cations of mercury, silver, lead, and tellurium inhibited the reaction. The determination was not possible in the presence of over 50 micrograms of chlorine or 20 micrograms bromine. Orig. art. has: 1 formula and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (Scientific Research Institute of Chemistry, Gorkiy State University)

ENCL: 00

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OTHER: 003

SUB CODE: IC

NO REF Sov: 003

Card 2/2

KOHEMAN, I.M.; SUMANOV, A.A.

Coprecipitation of cadmium with tetrabromomercuriate of antipyrine
[with English summary in insert]. Zhur.anal.khim.11 no.4:430-436
(MLRA 9:10)

Jl-Ag '56.
1.Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudar-
stvennom universitete.
(Cadmium) (Antipyrine)

S/137/62/000/012/081/085
A006/A101

AUTHOR: Tumanov, A. A.

TITLE: The Conference on the production and analysis of ultra-pure elements and substances, on September 27 - 30, 1961

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 12, abstract 12K70 ("Tr. po khimii i khim. tekhnol.", Gor'kiy, 1961, no. 4, 931 - 933)

TEXT: At the Conference, 75 reports and papers were heard and discussed. Special attention was given to the preparation and analysis of Si, Se, As, P, Se and other substances. It was mentioned in the Decision that large-scale research is conducted in the USSR on the production and analysis of ultra-pure elements; however, the general state of studies does as yet not meet all the requirements posed by the modern semiconductor techniques.

L. Vorob'yeva

[Abstracter's note: Complete translation]

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S/032/62/028/001/017/017
B116/B108

AUTHOR: Tumanov, A. A.

TITLE: Conference on production and analysis of high-purity elements
and substances

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 1, 1962, 126 - 127

TEXT: This is a report on a conference held at the Institut khimii Gor'kovskogo gosudarstvennogo universiteta (Institute of Chemistry of the Gor'kiy State University) in September, 1961. 75 lectures were delivered in three sections (production of high-purity elements and substances, physical analysis methods, chemical analysis methods). Particular attention was devoted to the production and analysis of silicon, sulfur, arsenic, phosphorus, and selenium. It was shown that the multistage separation processes are best suited for a thorough purification. O. P. Malkova and N. K. Rudnevskiy reported on a quantitative spectroscopic method of determining Cr, Ni, Ag, Co, Cu, In, Mn in specially pure sulfur. Some of these elements can be determined in the concentration range between $1 \cdot 10^{-4}$ and $5 \cdot 10^{-6}$ % with a mean error of 10 - 28%. The procedure followed

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by the lecturers was first to concentrate the impurities of sulfur on spectroscopically pure carbon dust, and then to subject the powder to spectral analysis. E. Yu. Davletshin and T. K. Aydarov presented results of a study of sensitivity and applicability of spectral analysis in determining impurities in high-purity sulfur, selenium, and tellurium. Kh. I. Zil'bershteyn, M. M. Piryutko, O. N. Nikitina, and M. P. Semov developed a spectrum-analytical procedure for previously enriched semiconducting silicon permitting Ag, Mn, Cu, In, Ga, Al, Mg, Fe, Ni, Pb, Ca, Zn to be determined with an error of 20 - 35%. N. K. Rudnevskiy, L. N. Sokolova, and S. G. Tsvetkov presented a method of spectrochemically determining indium and gallium in semiconducting silicon, by preparing a liquid concentrate of the admixtures. Reports on spectroscopic procedures of determining microimpurities in phosphorus (M. M. Kosheleva and I. K. Krotova), in aluminum (N. A. Rudneva, L. I. Pavlenko, G. I. Malofeyeva, and L. V. Meshcheryakova), and in antimony (G. V. Yang-shuo-hsiang and Ye. V. Abramov) were delivered. S. Ye. Kupriyanov gave a survey of the principal methods of increasing the sensitivity of mass spectrometers in determining small amounts of impurities. I. L. Agafonov, N. V. Larin, and G. G. Devyatikh showed that the analysis of monosilane on the mass spectrometer MU-1305 (MI-1305) permits the quantitative determination of diborane.

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germanium hydride, and arsine admixtures with a relative sensitivity of $10^{-5}\%$. N. A. Glukhareva and A. N. Murin reported on the uses of radio-activation analysis. A. A. Popel' and Ye. D. Grazhdannikov read on the determination of paramagnetic impurities by means of proton paramagnetic resonance. An equation derived by them serves to estimate the least concentration of paramagnetic particles. They also reported on the determination of paramagnetic ions in solutions by the volumetric method. I. M. Korenman presented a biological method in chemical analysis for determining microimpurities of the order of $10^{-7}\%$ and less. K. B. Yatsimirskiy spoke on the development of the catalytic method of determining microimpurities and also on the mathematical interpretation of results. A. K. Babko reported on results of his study of the catalytic chemiluminescence method. Ye. A. Bozhevol'nov spoke on the development of the luminescence method for determining microimpurities. Ye. N. Vinogradova, S. I. Sinyakova, and Kh. Z. Braynina reported on the use of anode polarography for determining small concentrations of substances. A. A. Tumanov and N. M. Shakhverdi presented their methods of determining $3 \cdot 10^{-3}\%$ of free zinc in ZnS, $1 \cdot 10^{-3}\%$ of free cadmium in CdS and indium

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in In_2S_3 , the examined amounts being 10 mg at most in all cases. V. A. Nazarenko, M. B. Shustova, and S. Ya. Vinkovetskaya reported on a chemical procedure for determining microimpurities in high-purity titanium, and gallium traces in semiconducting substances. Simple colorimetric methods of determining certain microimpurities in TiO_2 (A. A. Tumanov and A. N. Sidorenko), small quantities of selenium in high-purity sulfur (I. M. Korenman and Z. I. Glazunova), and beryllium in pure metals and copper alloys (L. O. Matveyev and M. Z. Yampol'skiy) were presented. Ya. I. Korenman identified magnesium oxide traces in Al_2O_3 by way of their different solubility in acids, and determined these traces down to 10^{-5} of magnesium in Al_2O_3 from reactions with certain dyes in alkaline medium. ✓
The complete documentation of this conference will be rendered in the first issue of "Trudy po khimii i khimicheskoy tekhnologii" to be published in Gor'kiy in 1962.

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TURCHOV, A.A.

All-Union Conference on the Preparation and Analysis of Derivatives
of High Purity. Zhur. anal. Khim. 19 no. 777-778 1964.
(MIRA 18:3)